DEPARTMENT of ENVIRONMENTAL SERVICES Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: CANAAN	STREET LAKE	Lake Area (ha):	122.62
Town:	CANAAN	Maximum depth (m):	6.7
County:	Grafton	Mean depth (m):	3.4
River Basin:	Connecticut	Volume (m³):	4146500
Latitude:	43°40'00" N	Relative depth:	0.5
Longitude:	72°02'00" W	Shore configuration:	1.63
Elevation (ft	1142	Areal water load (m/yr)	: 2.37
Shore length	(m): 6400	Flushing rate (yr ⁻¹):	0.70
Watershed are	ea (ha): 635.6	P retention coeff.:	0.79
% watershed p		Lake type: natura	al w/dam

BIOLOGICAL:	8 January 1991	19 July 1990
DOM. PHYTOPLANKTON (% TOTAL) #1	ASTERIONELLA 85%	ASTERIONELLA 80%
#2	DINOBRYON 15%	TABELLARIA 10%
#3		
PHYTOPLANKTON ABUNDANCE (cells/mL)		870.0
CHLOROPHYLL-A (µg/L)		2.54
DOM. ZOOPLANKTON (% TOTAL) #1	NO DOMINANT	KERATELLA 36%
#2		KELLICOTTIA 22%
#3		NAUPLIUS LARVA 22%
ROTIFERS/LITER	31	109
MICROCRUSTACEA/LITER	12	72
ZOOPLANKTON ABUNDANCE (#/L)	43	183
VASCULAR PLANT ABUNDANCE		Scattered
SECCHI DISK TRANSPARENCY (m)		4.0
BOTTOM DISSOLVED OXYGEN (mg/L)	8.5	0.3
BACTERIA (fecal col., #/100 ml) #1		< 10
#2		< 10
#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None Hypolimnion volume (m^3) : None

Anoxic volume (m^3) : 34000

CHEMICAL:		Lake: CANAAN STREET LAKE Town: CANAAN			
	8 January 1991 19 July 1990				
DEPTH (m)	2.0	4.0	2.0		4.0
pH (units)	7.2	7.2	7.2		7.2
A.N.C. (Alkalinity)	11.1	10.8	9.9		9.5
NITRATE NITROGEN	< 0.05	< 0.05	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.43	0.43			0.34
TOTAL PHOSPHORUS	0.010	0.011	0.009		0.010
CONDUCTIVITY (µmhos/cm)	56.5	57.4	53.0		53.7
APPARENT COLOR (cpu)	8	8	16		18
MAGNESIUM			0.78		
CALCIUM			4.6		·
SODIUM			3.8		
POTASSIUM			0.50		
CHLORIDE	5	5	5		5
SULFATE	5	5	4		4

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All results in mg/L unless indicated otherwise

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TROPHIC CLASSIFICATION: 1990

CALCITE SATURATION INDEX

TN : TP

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	2	1	0	3	Oligo.

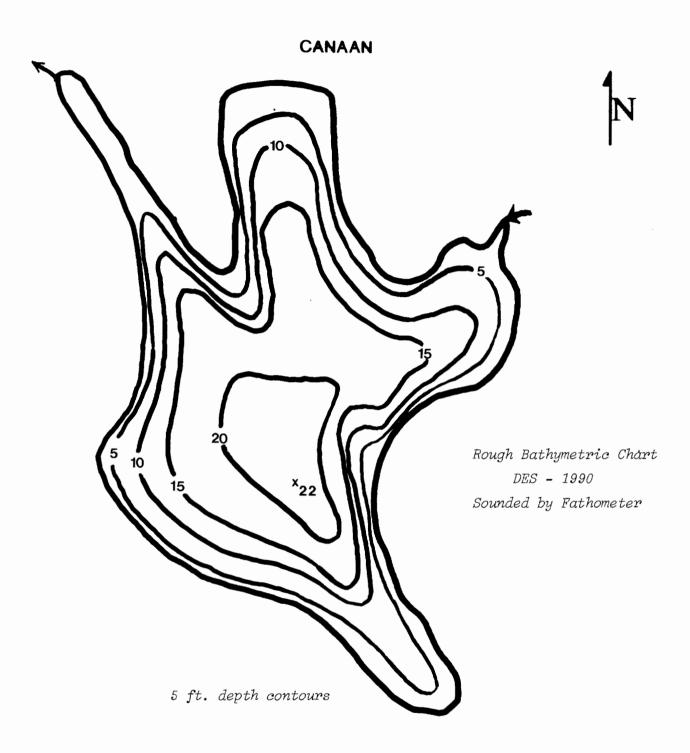
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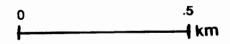
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COMMENTS:

- 1. Also known as Crystal Lake.
- 2. This lake is the public water supply for the Town of Canaan. The intake pipe is located in the southern cove, and this area of the lake is off limits to boating and swimming.
- 3. A shallow boat launch site is located adjacent to the town beach; parking is limited.
- 4. The lake has a town beach and beaches associated with Cardigan Mountain School and a campground.
- 5. This lake was previously surveyed in 1979. There was no change in its trophic state.
- 6. Dominant genera of wholewater phytoplankton were Aphanocapsa (25%), Chroomonas (15%) and tiny green flagellates (15%).

CANAAN STREET LAKE





FIELD DATA SHEET

LAKE: CANAAN STREET LAKE TOWN: CANAAN DATE: 07/19/90 WEATHER: HAZY & HUMID; PARTLY CLOUDY

DEPTH	TEMP	*DISSOLVED	OXYGEN
(M)	(°C)	OXYGEN	SATURATION
0.1	24.3	9.4	111 %
1.0	24.3	9.4	111 %
2.0	24.3	9.3	110 %
3.0	24.1	9.2	109 %
4.0	21.5	9.8	108 %
5.0	20.9	8.4	91 %
6.0	18.9	0.3	4 %
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SECCHI DISK (m): 4.0

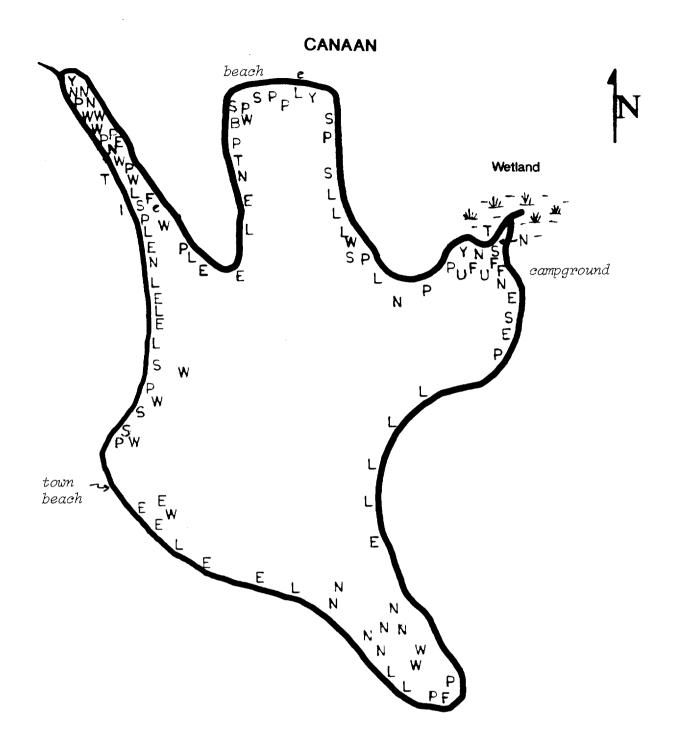
COMMENTS:

BOTTOM DEPTH (m): 6.4

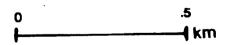
TIME: 1300

*Dissolved oxygen values are in mg/L

CANAAN STREET LAKE



Aquatic Plant Distribution Map



AQUATIC PLANT SURVEY

LAK	E: CANAAN STREET LAKE	TOWN: CANAAN	DATE: 07/19/90	
Y 0 • •	PLANT	ADIMDANCE		
Кеу	GENERIC	COMMON	ABUNDANCE	
S	Sparganium	Bur reed	Sparse	
E	Eriocaulon septangulare	Pipewort	Scattered	
L	Lobelia dortmanna	Water lobelia	Scattered	
N	Nymphaea	White water lily	Scattered	
P	Pontederia cordata	Pickerelweed	Sparse	
I	Iris	Iris	Sparse	
W	Potamogeton	Pondweed	Scattered	
F	Nymphoides cordatum	Floating heart	Sparse	
T	Typha	Cattail	Sparse	
Y	Nuphar	Yellow water lily	Sparse	
е	Eleocharis	Spike rush	Sparse	
В	Brasenia schreberi	Water shield	Sparse	
บ	Utricularia	Bladderwort	Sparse	
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	Name of the state			

OVERALL ABUNDANCE: Scattered

GENERAL OBSERVATIONS:

- 1. Plants were scattered overall but were locally abundant in the outlet cove and in the northeast inlet cove.
- 2. Freshwater sponges were observed.